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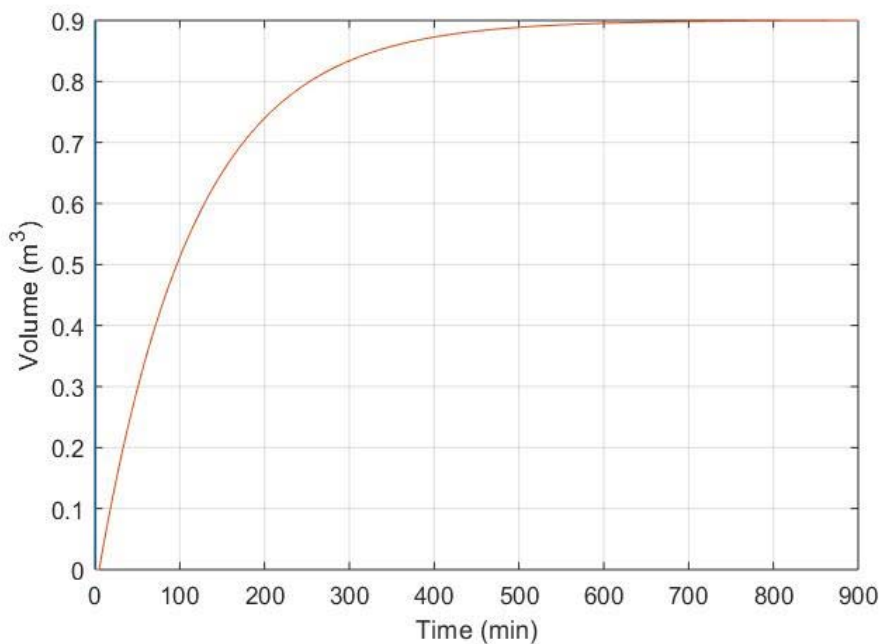
Matric Number: 17/ENG04/050

Department: ELECTRICAL AND ELECTRONICS ENGINEERING

ENG 382 ASSIGNMENT V

Simulation File

```
commandwindow
clearvars
clc
format short g
syms t kp td tp
v = kp*(1-exp(-((t-td)/tp)));
mdata = xlsread('1587203818odevbesdata', 'data1');
t1 = mdata(:,1);
v = mdata(:,2);
V1 = round(mdata(900,2),1)
t0 = ones(length(v),1)
t = [t0 t1]
[mcoeff, mcoeffint, mresid, mresidint, manova] = regress(v,t);
% mcoeff
% rsquaredvalue=mcoeff(1)
plot(t,v);
xlabel('Time (min)')
ylabel('Volume (m^3)')
grid on
```



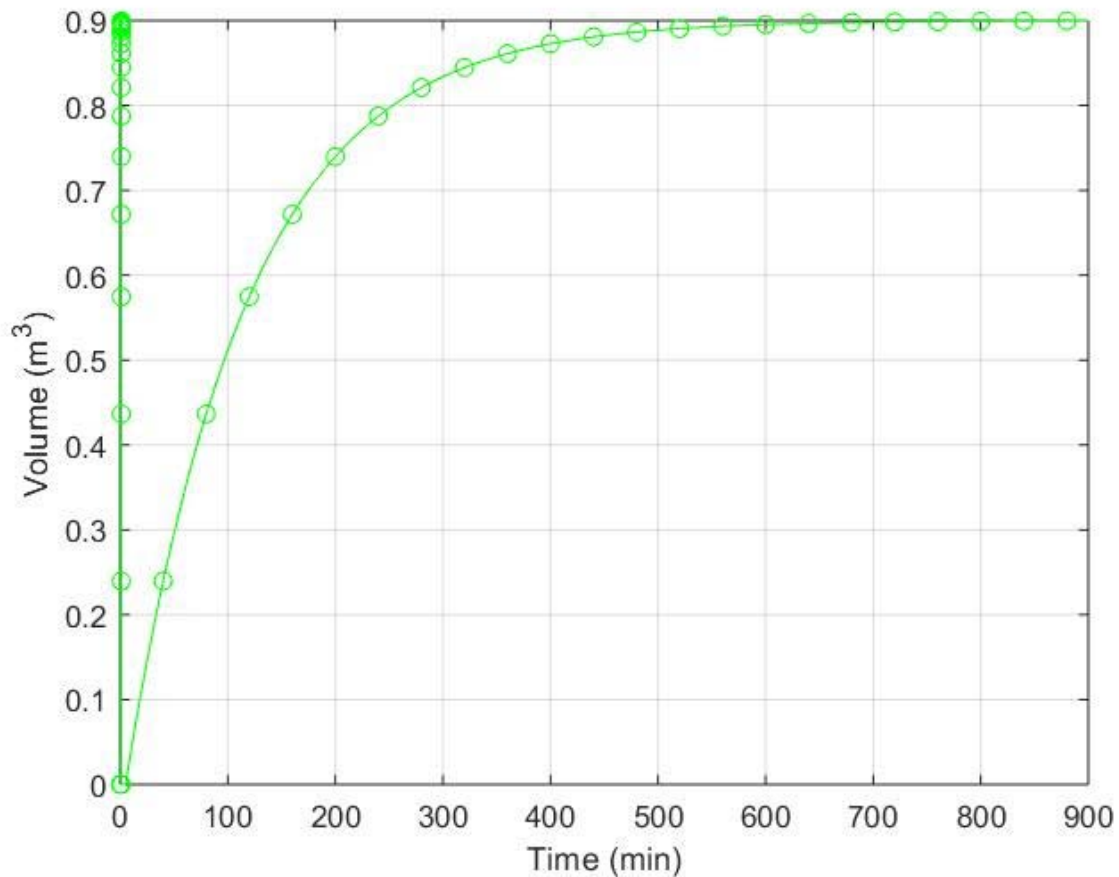
G

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t1 = mdata(:,1);
v = mdata(:,2);
V1 = round(mdata(900,2),1)
t0 = ones(length(v),1)
t = [t0 t1]
[mcoeff, mcoeffint, mresid, mresidint, manova] = regress(v,t);
% mcoeff
% rsquaredvalue=mcoeff(1)
plot(t,v(:,1), 'g-o', 'Marketindices', ([1:40::length(t)]));
xlabel('Time (min)')
ylabel('Volume (m^3)')
grid on

```

sir with this coding i got this graph



RAPH

```
commandwindow
clearvars
clc
format short g
syms t kp td tp
v = kp*(1-exp(-((t-td)/tp)));
mdata = xlsread('1587203818odevbesdata', 'data1');
t1 = mdata(:,1);
v = mdata(:,2);
t0 = ones(length(v),1)
t = [t0 t1]
y = @(kp,td,tp)(-((exp(t1)-exp(-td))/exp(tp)));
initials = [0.1,0.1,0.1]
[mcoeff, mcoeffint, mresid, mresidint, manova] = nlinfit(v,t,y initials)
% mcoeff
plot(t,v)
grid on
grid minor
```

sir with this code also i got the same answer as the other one

